SEQUENCE LISTING

<110>   Kinney, Anthony

<120>   Hypoallergenic Transgenic Soybeans

<130>   BB1432 US NA

<140>
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<150>   60/189,823
<151>   16 MARCH 2000

<160>   16

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<212>   DNA
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       tagatgggcc aattatgttc gtggatgatt ctcatgcacc tagcttatgg actaaattcc   660
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2

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gaggcgagta tcctccactc agcgaaccgg atattggagt tttacttgtc aaactctcag  960
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<213>   Glycine max

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| Leu | Phe | Leu | Met | Ser | Asn | Ser | Thr | Arg | Val | Phe | Lys | Thr | Asp | Ala | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| Glu | Met | Arg | Val | Leu | Lys | Ser | His | Gly | Gly | Arg | Ile | Phe | Tyr | Arg | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| Met | His | Ile | Gly | Phe | Ile | Ser | Met | Glu | Pro | Lys | Ser | Leu | Phe | Val | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |

| Gln | Tyr | Leu | Asp | Ser | Asn | Leu | Ile | Ile | Phe | Ile | Arg | Arg | Gly | Glu | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

| Lys | Leu | Gly | Phe | Ile | Tyr | Asp | Asp | Glu | Leu | Ala | Glu | Arg | Arg | Leu | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |

| Thr | Gly | Asp | Leu | Tyr | Met | Ile | Pro | Ser | Gly | Ser | Ala | Phe | Tyr | Leu | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |

| Asn | Ile | Gly | Glu | Gly | Gln | Arg | Leu | His | Val | Ile | Cys | Ser | Ile | Asp | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |

| Ser | Thr | Ser | Leu | Gly | Leu | Glu | Thr | Phe | Gln | Ser | Phe | Tyr | Ile | Gly | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |

| Gly | Ala | Asn | Ser | His | Ser | Val | Leu | Ser | Gly | Phe | Glu | Pro | Ala | Ile | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |

| Glu | Thr | Ala | Phe | Asn | Glu | Ser | Arg | Thr | Val | Val | Glu | Glu | Ile | Phe | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |

| Lys | Glu | Leu | Asp | Gly | Pro | Ile | Met | Phe | Val | Asp | Asp | Ser | His | Ala | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |

| Ser | Leu | Trp | Thr | Lys | Phe | Leu | Gln | Leu | Lys | Lys | Asp | Asp | Lys | Glu | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |

3
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            245             250             255
Tyr Asn Leu Tyr Asp Asp Lys Lys Ala Asp Phe Lys Asn Ala Tyr Gly
            260             265             270
Trp Ser Lys Ala Leu His Gly Gly Glu Tyr Pro Pro Leu Ser Glu Pro
        275             280             285
Asp Ile Gly Val Leu Leu Val Lys Leu Ser Ala Gly Ser Met Leu Ala
    290             295             300
Pro His Val Asn Pro Ile Ser Asp Glu Tyr Thr Ile Val Leu Ser Gly
305             310             315             320
Tyr Gly Glu Leu His Ile Gly Tyr Pro Asn Gly Ser Lys Ala Met Lys
            325             330             335
Thr Lys Ile Lys Gln Gly Asp Val Phe Val Val Pro Arg Tyr Phe Pro
            340             345             350
Phe Cys Gln Val Ala Ser Arg Asp Gly Pro Leu Glu Phe Phe Gly Phe
        355             360             365
Ser Thr Ser Ala Arg Lys Asn Lys Pro Gln Phe Leu Ala Gly Ala Ala
    370             375             380
Ser Leu Leu Arg Thr Leu Met Gly Pro Glu Leu Ser Ala Ala Phe Gly
385             390             395             400
Val Ser Glu Asp Thr Leu Arg Arg Ala Val Asp Ala Gln His Glu Ala
            405             410             415
Val Ile Leu Pro Ser Ala Trp Ala Ala Pro Pro Glu Asn Ala Gly Lys
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Leu Lys Met Glu Glu Glu Pro Asn Ala Ile Arg Ser Phe Ala Asn Asp
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ggcagctgcg atgatcactg caagaacaaa gagcacttgc tcagaggcag atgcagggac   240
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4

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Asn Leu Ala Asp Thr Tyr Arg Gly Pro Cys Phe Thr Thr Gly Ser Cys
         35                  40                  45

Asp Asp His Cys Lys Asn Lys Glu His Leu Leu Arg Gly Arg Cys Arg
     50                  55                  60

Asp Asp Phe Arg Cys Trp Cys Thr Lys Asn Cys
 65                  70                  75


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<212>  DNA
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<220>
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<210>  8
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<212>  DNA
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<220>
<223>  Description of Artificial Sequence:  P34 gene primer


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<210>  9
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<212>  DNA
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5

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ttgttgttct cgtggatggg gatcttatct tcctcctcgc tatctttgtt tatcgtattt 660
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<212> PRT
<213> Glycine max

<400> 10

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Pro Gln Pro Ser His Val Thr Ala Leu Ile Thr Arg Pro Ser Cys Pro
        35                  40                  45

Asp Leu Ser Ile Cys Leu Asn Ile Leu Gly Gly Ser Leu Gly Thr Val
    50                  55                  60

Asp Asp Cys Cys Ala Leu Ile Gly Gly Leu Gly Asp Ile Glu Ala Ile
65                  70                  75                  80

Val Cys Leu Cys Ile Gln Leu Arg Ala Leu Gly Ile Leu Asn Leu Asn
                85                  90                  95

Arg Asn Leu Gln Leu Ile Leu Asn Ser Cys Gly Arg Ser Tyr Pro Ser
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<213> Glycine max

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<210> 12
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<212> PRT
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6

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Trp Leu Gln Ser Thr Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
            35              40              45

Ala Ile Met Asn Asp Phe Asn Glu Pro Gly Ser Leu Ala Pro Thr Gly
        50              55              60

Leu Tyr Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65              70              75              80

Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Val Lys Lys
                85              90              95

Thr Gly Ala Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
            100             105             110

Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Asp
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Gln Gly Tyr
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<210>   13
<211>   396
<212>   DNA
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gctccaactg gattgtatct cggtggcacc aaatatatgg tcatccaggg tgaacccggt  240
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            20              25              30

Trp Ala Gln Ser Thr Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
            35              40              45

Ala Ile Met Asn Asp Phe Asn Glu Pro Gly Ser Leu Ala Pro Thr Gly
        50              55              60

Leu Tyr Leu Gly Gly Thr Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
65              70              75              80
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                     85              90              95

    Thr Gly Ala Ala Leu Ile Ile Gly Ile Tyr Asp Glu Pro Met Thr Pro
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    Gln Gly Tyr
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<210>   15
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                20                  25                  30
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Ile Gln Lys Leu Asn Ala Leu Lys Pro Gly Asn Arg Ile Glu Ser Glu
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Gly Gly Leu Ile Glu Thr Trp Asn Pro Asn Asn Lys Pro Phe Gln Cys
        50   55   60

Ala Gly Val Ala Leu Ser Arg Cys Thr Leu Asn Arg Asn Ala Leu Arg
65   70   75   80

Arg Pro Ser Tyr Thr Asn Gly Pro Gln Glu Ile Tyr Ile Gln Gln Gly
                85   90   95

Lys Gly Ile Phe Gly Met Ile Tyr Pro Gly Cys Ser Ser Thr Phe Glu
            100   105   110

Glu Pro Gln Gln Pro Gln Gln Arg Gly Gln Ser Ser Arg Pro Gln Asp
        115   120   125

Arg His Gln Lys Ile Tyr Asn Ser Arg Glu Gly Asp Leu Ile Ala Val
    130   135   140

Pro Thr Gly Val Ala Trp Trp Met Tyr Asn Asn Glu Asp Thr Pro Val
145   150   155   160

Val Ala Val Ser Ile Ile Asp Thr Asn Ser Leu Glu Asn Gln Leu Asp
            165   170   175

Gln Met Pro Arg Arg Phe Tyr Leu Ala Gly Asn Gln Glu Gln Glu Phe
            180   185   190

Leu Lys Tyr Gln Gln Glu Gln Gly Gly His Gln Ser Gln Lys Gly Lys
        195   200   205

His Gln Gln Glu Glu Glu Asn Glu Gly Gly Ser Ile Leu Ser Gly Phe
    210   215   220

Thr Leu Glu Phe Leu Glu His Ala Phe Ser Val Asp Lys Gln Ile Ala
225   230   235   240

Lys Asn Leu Gln Gly Glu Asn Glu Gly Glu Asp Lys Gly Ala Ile Val
            245   250   255

Thr Val Lys Gly Gly Leu Ser Val Ile Lys Pro Pro Thr Asp Glu Gln
            260   265   270

Gln Gln Arg Pro Gln Glu Glu Glu Glu Glu Glu Asp Glu Lys Pro
        275   280   285

Gln Cys Lys Gly Lys Asp Lys His Cys Gln Arg Pro Arg Gly Ser Gln
    290   295   300

Ser Lys Ser Arg Arg Asn Gly Ile Asp Glu Thr Ile Cys Thr Met Arg
305   310   315   320

Leu Arg His Asn Ile Gly Gln Thr Ser Ser Pro Asp Ile Tyr Asn Pro
            325   330   335

Gln Ala Gly Ser Val Thr Thr Ala Thr Ser Leu Asp Phe Pro Ala Leu
            340   345   350

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Ser Trp Leu Arg Leu Ser Ala Gly Phe Gly Ser Leu Arg Lys Asn Ala
        355   360   365

Met Phe Val Pro His Tyr Asn Leu Asn Ala Asn Ser Ile Ile Tyr Ala
    370   375   380

Leu Asn Gly Arg Ala Leu Ile Gln Val Val Asn Cys Asn Gly Glu Arg
385   390   395   400

Val Phe Asp Gly Glu Leu Gln Glu Gly Arg Val Leu Ile Val Pro Gln
            405   410   415

Asn Phe Val Val Ala Ala Arg Ser Gln Ser Asp Asn Phe Glu Tyr Val
        420   425   430

Ser Phe Lys Thr Asn Asp Thr Pro Met Ile Gly Thr Leu Ala Gly Ala
        435   440   445

Asn Ser Leu Leu Asn Ala Leu Pro Glu Glu Val Ile Gln His Thr Phe
    450   455   460

Asn Leu Lys Ser Gln Gln Ala Arg Gln Ile Lys Asn Asn Asn Pro Phe
465   470   475   480

Lys Phe Leu Val Pro Pro Gln Glu Ser Gln Lys Arg Ala Val Ala
            485   490   495